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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,038	10/27/2003	Kevin T. O'Dougherty	N95.12-0015	3887

7590  
William F. Ryann  
ATMI, Inc.  
7 Commerce Drive  
Danbury, CT 06810

EXAMINER
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PRICE, CRAIG JAMES

ART UNIT	PAPER NUMBER
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3753

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07/31/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/694,038	<b>Applicant(s)</b> O'DOUGHERTY ET AL.	
	<b>Examiner</b> Craig Price	<b>Art Unit</b> 3753	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 March 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-14,16-20 and 22-24 is/are pending in the application.
- 4a) Of the above claim(s) 3,15 and 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-14 and 16-20,22-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The rejections pertaining to second paragraph of 35 U.S.C. 112 have been removed.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1,2,4-12,14,16-20 and 22-24 rejected under 35 U.S.C. 103(a) as being unpatentable over Van den Bergen et al. (6,048,113).

Regarding claims 1 and 14, Van den Bergen et al. disclose a liquid dispensing and recirculating system comprising, a container (15) having a mouth (16), a cap (30) for coupling with the mouth, a connector for coupling with the cap (Col.4, Lns.36-39), the connector further comprising, a connector head (28), and a probe (32) extending from the connector head and insertable through the cap and into the mouth. The probe having a flow passage therein which terminates near a probe tip, a pump (Col. 3, Lns. 14-19) coupled with the probe and with the flow passage for pumping fluid in the container through the probe and the flow passage. A fluid channel (below 55) extending longitudinally along an exterior of the probe, wherein the system is adapted to return recirculated fluid to the fluid in the container substantially without turbulence, and wherein the fluid return channel is adapted to permit air in the recirculated fluid to be released from the fluid return channel before reaching the fluid the fluid in the container to prevent injection of air into the fluid return channel (the air rises to the top of the container as the liquid is entering into the container along the channel, just as the liquid exists the area where the diameter of 55 and the open groove of 55 intersect) as shown in figure 1.

Regarding claim 2, Van den Bergen et al. disclose that the fluid return channel (below 55) is formed along an exterior of the probe from an area proximate to the connector head to an area proximate to the probe tip as shown in figure 1.

Regarding claim 4, Van den Bergen et al. disclose that the fluid channel has a uniform depth as shown in figure 1.

Regarding claim 5, Van den Bergen et al. disclose that the fluid channel extends along the probe substantially parallel with the flow passage as shown in figure 1.

Regarding claim 6, Van den Bergen et al. disclose that the fluid return channel includes a bore (55) formed at the area proximate to the connector head for delivering the recirculated fluid to the fluid return channel as shown in figure 1.

Regarding claim 7, Van den Bergen et al. disclose that the bore is sized such that recirculated fluid remains within the fluid return channel as it is returned to the container as shown in figure 1.

Regarding claim 8, Van den Bergen et al. disclose that the cap includes a first key element and the connector includes a second key element configured to mate with the first key element (Col. 4, Lns. 55- Col. 5, Lns. 2, the handle and cam mate with surfaces 44 and 45) as shown in figures 1 and 3.

Regarding claims 9-12, Van den Bergen et al. disclose a sensor for sensing when the first and second key elements are mated and for sensing when the first and second key elements are not mated, and wherein the sensor comprises a detector mounted on the connector and a detector affecting element mounted on the cap, the detector mounted on the connector having two states, one state when the first and second key codes are mated and the cap and connector are coupled in a predetermined orientation and a second state when the first and second key codes are not mated and the cap and connector are not coupled in the predetermined orientation and wherein the sensor comprises a detector mounted on the cap and a detector affecting element mounted on the connector, the detector mounted on the cap having

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two states, one state when the first and second key codes are mated and the cap and connector are coupled in a predetermined orientation and a second state when the first and second key codes are not mated and the cap and connector are not coupled in the predetermined orientation and further comprising, a controller coupled with the sensor and the pump such that the controller enables the pump when the sensor senses that the first and second key elements are mated and disables the pump when the sensor senses that the first and second key elements are not mated (Col. 3, Lns. 41-65, and Col. 6, Lns. 7-10).

Regarding claim 16, Van den Bergen et al. disclose that the fluid return channel has a uniform depth as shown in figure 1.

Regarding method claims 17-20 and 22-24 the device shown by Van den Bergen et al. will perform the methods as recited in claims 17-20 and 22-24, during normal operational use of the device, the method of making or using the device is inherent in using the apparatus.

Van den Bergen et al. is silent to the return channel extending longitudinally along and formed on the exterior surface of the probe.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to switch the inlet and return lines of the device of Van den Bergen et al., since it has been held that a mere reversal of essential working parts of a device involves only routine skill in the art.

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van den Bergen et al. '113 in view of Priebe et al. (US 2003/0075566).

Van den Bergen et al. has taught all of the features of the claimed invention although is silent to the device having a pressure assist port.

Priebe et al. disclose that the pressure assist port (Figure 4A) that is coupled to an external pressure source for introducing pressurized gas into the container to facilitate flow of the fluid from the container (Page 4, para.0067).

In view of the Priebe et al. patent, it would have been obvious to one of ordinary skill in the art at the time of invention to employ the external pressure source for introducing pressurized gas into the container to facilitate flow of the fluid from the container of Priebe et al. onto the device of Van den Bergen et al. in order to avoid contamination of the process liquid (para.0065).

### ***Response to Arguments***

5. Applicant's arguments filed 3/28/2008 have been fully considered but they are not persuasive. Applicant argues that it would not have been obvious to reverse the essential working parts of the Van den Bergen et al. reference in order to provide a return channel extending longitudinally along and formed on the exterior surface of the probe. Applicant argues that since Van den Bergen et al. teaches inlet and outlet openings with specific cross sections, one would not reverse the flow of the device as it would render the "system unsatisfactory for its intended purpose". This is not persuasive, as the reversing of the flow would still provide a re-circulated fluid to the intended using point, thereby still maintaining use for its main purpose. The fact that reversing of the flow would not provide a certain aspect/function of the device related to an operating characteristic (e.g. flow speed) does not render the device unable to be

used for its intended purpose. Applicant argues that the Van den Bergen et al. reference does not provide an inlet passage that refills fluid “substantially without turbulence”, however the structure of the device, the opening of 55 with the exposed groove beneath, is equivalent to the structure as applicant's, therefore the flow will react in the same manner as applicant's device. For, example, should applicant increase return pressure, there is every possibility that returned flow will enter the tank with turbulence. Clearly the condition with or without turbulence is an operating characteristic solely dependent on flow speed and not dependent on which path that extends furthest within the tank. Furthermore, the mere addition of fluid in a tank will in some manner instigate mixing.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig Price whose telephone number is (571) 272-2712. The examiner can normally be reached on 7AM - 5:30PM M-R.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CP

15 July 2008

/John Rivell/  
Primary Examiner, Art Unit 3753

/C. P./  
Examiner, Art Unit 3753